

## IMPROVEMENTS IN BRACKET STRIPPING

This invention relates to brackets, and more particularly to the production of brackets to suit particular requirements.

### 5 BACKGROUND OF THE INVENTION

Brackets to hold, support or join various components are well known and are available in a wide variety of shapes and sizes. However a person in the field often is confronted with a situation where a particular bracket is required. Usually the person would carry brackets which may normally be required in the situation in the  
10 field, but it is often not feasible for the person to carry a supply of every type of bracket which may be required in that particular situation.

Thus the person often has to try to modify an existing bracket, or to try to obtain a piece of sheet material and try to make a suitable bracket using the limited tools available. For example it is often difficult in situations such as this to bend the sheet  
15 material to form a right angle with the bend being a tight sharp bend. This is particularly so when the sheet material has to be bent or folded in more than one plane.

Thus it is an object of this invention to provide a sheet material suitable for making a bracket or connecting plate or element, which bracket can be made on site or in the  
20 field to suit the individual requirements.

It is a further object of the invention to provide a sheet of metal suitable for making a bracket, the sheet being provided with at least one series of apertures to facilitate the making of a bracket, joiner or connecting element.

It is a further object of the invention to provide a metal sheet having at least one  
25 series of apertures aligned longitudinally and laterally of the sheet of metal.

It is a still further object of the invention to provide a sheet of metal suitable for forming at least one bracket, connector or joiner there from, said sheet of metal

having a series of diamond or rectangular shaped apertures therein, said diagonals of the apertures being longitudinal of the sheet and lateral to the sheet.

## BRIEF STATEMENT OF THE INVENTION

- 5 Thus there is provided according to the invention a sheet of material suitable for making a bracket, connector joiner or like object, said sheet of material including at least one series of apertures to facilitate the construction of at least one bracket, connector or joiner there from.

Preferably the sheet of material is a metal sheet, but it is also intended that it will be made from plastic or other materials.

- 10 Preferably the series of apertures are arranged longitudinally and laterally of the sheet of material.

Preferably the at least one series of apertures are diamond or square in shape.

Preferably the diamond or square apertures are arranged with the diagonals longitudinal and lateral of the sheet to facilitate the folding and cutting of the sheet.

- 15 Preferably there is a further series of apertures, preferably round for the receipt of fastening means to fasten the bracket, joiner or connector.

- 20 Also there is provided according to the invention a method of constructing a bracket, joiner or fastener including the steps of providing a metal sheet having at least one series of apertures arranged longitudinally and laterally of the sheet, and cutting and/or folding the metal sheet along selected portions of the series of apertures.

Preferably the at least one series of apertures are diamond or square shaped with the diagonals of the apertures are longitudinal and lateral of the sheet, and folding and/or cutting the sheet along selected diagonals of selected apertures.

## 25 BRIEF DESCRIPTION OF THE DRAWINGS

In order to more fully describe the invention reference will now be made to the accompanying drawings wherein:-

Figure 1 (a),(b),(c) show in plan three examples of the sheet,

Figure 2 (a) and (b) show in perspective an example of a sheet and formed into an angle bracket,

Figure 3 shows an example of cutting the sheet,

5 Figure 4 shows how the sheet can be bent,

Figure 5 illustrates a further example of bending the sheet material,

Figure 6 illustrates an example of the use of the formed bracket to attach a beam to the top of a post,

Figure 7 illustrates a formed channel,

10 Figure 8 illustrates an example of further use of the sheet material, and

Figure 9 shows the sheet material formed cut as a strip.

#### DESCRIPTION OF THE PREFERRED EMBODIMENT

The metal sheet is shown with a series of spaced rows of diamond shaped holes extending along the sheet of metal. Preferably the longitudinal spacing of the  
15 diamond holes in each row is 25mm and the spacing between the rows, with the diamond holes extending laterally across the sheet at right angles to the rows is 20mm, this gives the user maximum bracket size options. It is also our intention to produce this product with other hole spacing options. The sheets can be produced in various lengths and widths, either flat, or as shown at an angle either in  
20 the centre of the sheet or along any portion of the sheet including an edge of the sheet.

Each of the diamond shaped holes are so arranged that one of the diagonals of each hole extend in the longitudinal direction of the sheet and the other diagonal extends at right angles thereto laterally of the sheet.

25 The dimensions of the diamond shaped holes and the spacing between the holes both longitudinally of the sheet and laterally of the sheet is such that the metal sheet

can be folded and bent along either of the diagonals by hand without the necessity of requiring any sophisticated tools or implements. The bending results in a clean sharp bend in a straight line. The bending follows the diagonals of the holes.

- 5 The diamond holes can be used to attach the bracket to the elements or structure. However it is preferred to provide a second series of round holes to be used to attach the formed bracket to elements or the structure. The second series of holes are round, each row of the round holes being spaced between the rows of diamond holes both longitudinally and laterally of the sheet.

- 10 The sheet can be bent and cut to various shapes with the bends at right angles. However it is to be realised in some situations the sheet portion can be bent into angles other than at right angles to either acute or obtuse angles. The sheet can be bent into channel shapes, and a channel with side flanges. Thus by a combination of cutting and folding brackets can be shaped on site to suit a particular situation.

- 15 The sheet can be bent by hand, and if a very tight angle is required, the bend can be made by using either one or two pairs of pliers.

When the sheet has to be cut, the cut is across a diagonal of the diamond or square holes and it is easy to cut in a straight line by following the diagonals of successive holes.

- 20 Figures 1 (a) (b) and (c) illustrate a sheet of material 1 having rows of square diamond shaped holes 2 and rows of round holes 3. The holes 2 extend across and along the sheet 1 with the holes 3 being spaced between the rows of holes 1.

The sheet 1 can be produced in various lengths and widths, the examples 4 and 5 may be produced in these widths, or can be cut from sheet 1 by cutting with tin snips along the diagonals of a row of holes 2.

- 25 A perspective view of example 4 is shown in Figure 2 (a), and an example of an angle bracket is 6 formed by folding along the diagonals of a row of holes 2.

As shown in Figure 3 the sheet material can be cut along the diagonals of the holes 2 by tin snips 7, or easily bent by hand along the diagonals of holes 2 as per Figures 4 and 5.

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An example of brackets to attach a beam 8 to the top of a post 9, the brackets having a channel portion 10 to be attached to the beam 8, the base 11 of the channel 10 continuing to the base 11 of a bracing channel 12, the base also continuing to the base of channel 13 attached to the post 9.

- 5 Further examples are shown in Figure 7, a channel 14 with side flanges 14, and Figure 8 a further example of attaching beam 8 to post 9 by angle brackets 16 and 17. It is realised the brackets 16 and 17 could be formed as a single bracket. Figure 9 illustrates the use of a single strip of material with turned ends 19 to form a tie to hold an object to a supporting structure.
- 10 Thus there is provided according to the invention a means for making a bracket on site by the provision of a sheet material having rows of diamond shaped holes whereby the sheet can be easily folded along the diagonals of the holes. The diagonals of the row of holes are used to cut the material in a straight line.

- 15 Although various examples of the invention have been described it is to be realised the sheet of material having the square of diamond shaped holes can be produced in any desired width and length. Also it is to be appreciated the round holes suitable for fastening the formed bracket to a member are not essential to the invention for fasteners may be used in the square or diamond shaped holes.